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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,089

12/27/2006

Tommaso Di Giacomo

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BERENATO, WHITE & STAVISH, LLC
6550 ROCK SPRING DRIVE
SUITE 240
BETHESDA, MD 20817

EXAMINER

ALTUN, NURI B

ART UNIT

PAPER NUMBER

3657

MAIL DATE

DELIVERY MODE

06/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,089	Applicant(s) DI GIACOMO ET AL.	
	Examiner NURI ALTUN	Art Unit 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-16 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-16 and 22-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment received on March 27, 2009 has been acknowledged. Claims 1, 4-7, 9-13 and 16 have been amended.

Drawings

1. The drawings are objected to because **Figure 8 shows “two different parts numbered 75”**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **Reference number 69 in figures 7, 8 and 9 is not mentioned**. Corrected

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drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Objections to the specification have been overcome.

Claim Objections

4. Objections to the claims have been overcome.

Claim Rejections - 35 USC § 112

Claim rejections under second paragraph of 35 U.S.C. 112 have been overcome.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **1, 4-8 and 22-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Webb (4,822,321)**, in view of **Barrett (2,823,546)**, further in view of **Temma et al. (20020183149)**.

As per claim 1, Webb teaches

a drive assembly for driving a rotary member (18) in the form of a shaft of a pump; the assembly being characterized by comprising

a movable supporting member (46);

a drive wheel (58) fitted idly to said movable supporting member;

elastic means (54) for moving said movable supporting member (col.3, lines 28-33), so that said drive wheel (58) angularly engages a drive member (20), powered by the combustion engine, to drive the rotary member (see Figure 2);

said elastic means (54) exert a force, to push said drive wheel (58) against said drive member (20) (col.3, lines 48-54);

Webb doesn't explicitly disclose actuating means which can be activated to exert a force in opposition to that exerted by said elastic means, to detach said drive wheel from at least one of said rotary member and said drive member, wherein said actuating means comprise an electric motor which is reversible such that, when said elastic means exert a force, to push said drive wheel against said rotary member, which is greater than the travel resistance of said actuating means when maintained in a disabled rest condition, said force overcomes the resistance of the electrical rotary motor

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Barrett teaches actuating means (1) which can be activated to exert a force in addition to that exerted by elastic means (16), to bring a wheel (13) in contact with a rotary member (20),

said drive wheel (13) angularly engages said rotary member (20) col.2, lines 43-46),

elastic means (16) exert a force to push said drive wheel (13) against a rotary member (20) (col.2, lines 43-46).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the assembly of Webb to include the actuating means as taught by Barrett in order to ensure a firm driving contact (col.2, lines 51-52).

Webb and Barrett combination doesn't explicitly disclose actuating means which can be activated to exert a force in opposition to that exerted by said elastic means, to detach said drive wheel from at least one of said rotary member and said drive member, and reversible electric motor such that when said elastic means exert a force, to push said drive wheel against said rotary member and said rotary member, which is greater than the travel resistance of said actuating means when maintained in a disabled rest condition, said force overcomes the resistance of the electrical rotary motor.

Temma et al. teach a stepless speed change unit having an electric motor (55) which can be activated to exert a force in opposition to that exerted by said elastic means (54), to detach a drive wheel (51) from a drive member (15) (paragraph 0064; since the motor is capable of being reversely driven to subtract tension from the initial tension supplied by the spring, the motor can be reasonably considered as being

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capable of detaching the drive wheel from the drive member by the motor applying a greater tension than that of the spring), and the electric motor (55) is reversible such that, when said elastic means exert a force, to push said drive wheel (51) against said drive member (15), which is greater than the travel resistance of said motor when maintained in a disabled rest condition, said force overcomes the resistance of the electrical rotary motor (see Fig. 3, paragraph 0063 lines 9-14 and paragraph 0064; the spring keeps the drive wheel in contact with the belt by overcoming the motor's resistance when the motor is not operating).

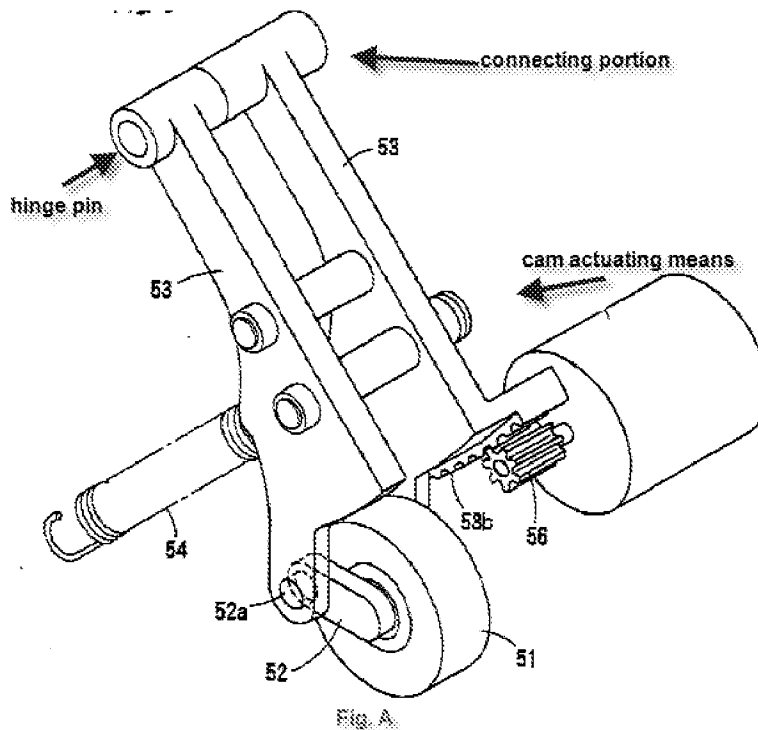
Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Webb and Barrett to include the reversing motor arrangement that detaches the drive wheel and elastic means arrangement that keeps the wheel in contact with the belt when the motor is off as taught by Temma et al. in order to avoid excessive load on the belt and maintain optimum belt tension.

As per claims 4-8, Webb and Barrett combination teaches all the structural limitations of the claimed invention, as mentioned above, but doesn't explicitly disclose a mechanical drive interposed between actuating means and said movable supporting member (Claim 4), movable supporting member comprises a connecting portion, opposite the drive wheel, connected to mechanical drive, to move along a circular trajectory (Claim 5), and said mechanical drive comprises a gear drive interposed between the electric rotary motor and said movable supporting member (claim 6), and

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mechanical drive comprises cam actuating means (Claim 7) interposed between said gear drive and said connecting portion (Claim 8).

Temma et al. teach a mechanical drive (56 and 53b) interposed between actuating means and said movable supporting member (53) (Claim 4), movable supporting member comprises a connecting portion, opposite the drive wheel, connected to mechanical drive, to move along a circular trajectory (see Fig. A) (Claim 5), and said mechanical drive comprises a gear drive (56) interposed between the electric rotary motor and said movable supporting member (claim 6), and mechanical drive comprises cam actuating means (see Fig. A) (Claim 7) interposed between said gear drive and said connecting portion (see Figs. A) (Claim 8).



Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Webb and Barrett to include the mechanical drive as taught By Temma et al. in order to control belt tension.

As per claim 22, Webb and Barrett combination teaches all the structural limitations of the claimed invention, as mentioned above, but doesn't explicitly disclose said movable supporting member comprises two contoured portions.

Temma et al. teach said movable supporting member (53) comprises two contoured portions.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Webb and Barrett to include the contoured portions as taught by Temma et al. in order to provide a proper location for the wheel to rotate.

As per claim 23, Webb and Barrett combination teaches all the structural limitations of the claimed invention, as mentioned above, but doesn't explicitly disclose said contoured portions extend on opposite sides of a central plane of symmetry of the drive wheel, which plane is perpendicular to the axis of rotation of said drive wheel

Temma et al. teach said contoured portions extend on opposite sides of a central plane of symmetry of the drive wheel (51), which plane is perpendicular to the axis of rotation of said drive wheel (See Fig. 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Webb and Barrett to include the

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contoured portions as taught by Temma et al. in order to provide a proper location for the wheel to rotate.

As per claim 24, Webb, Barrett and Temma et al. combination doesn't explicitly disclose said contoured portions being made of molded plastic material. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the contoured portions to be made of molded plastic material to provide proper strength and weight characteristics. Also note *MPEP Section 2144.07* states that the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination.

As per claim 25, Webb and Barrett combination teaches all the structural limitations of the claimed invention, as mentioned above, but doesn't explicitly disclose said contoured portions contact, and are connected integrally to, each other.

Temma et al. teach said contoured portions contact, and are connected integrally to, each other (See Fig. 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Webb and Barrett to include the contoured portions as taught by Temma et al. in order to maximize compactness.

As per claim 26, Webb and Barrett combination teaches all the structural limitations of the claimed invention, as mentioned above, but doesn't explicitly disclose contoured portions define at least one end fork having respective arms; each arm having a respective integral cylindrical projection forming part of a hinge pin coaxial with a relative axis, and to which the drive wheel is mounted to rotate about the relative axis.

Temma et al. teach contoured portions define at least one end fork having respective arms; each arm having a respective integral cylindrical projection forming part of a hinge pin (52b) coaxial with a relative axis (see Fig. 4), and to which the drive wheel (51) is mounted to rotate about the relative axis (paragraph 0063, lines 19-21).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Webb and Barrett to include the contoured portions as taught by Temma et al. in order to provide a proper location for the wheel to rotate.

Claim **9** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Webb (4,822,321)**, in view of **Barrett (2,823,546)**, further in view of **Temma et al. (20020183149)**, further in view of **Floehr (3,157,132)**.

Webb and Barrett combination teaches all the structural limitations of the claimed invention, as mentioned above, but doesn't explicitly disclose said connecting portion is a hollow tubular portion having an axis of symmetry parallel to the axis of rotation of said drive wheel; and in that said cam actuating means comprise a first hinge pin engaging said hollow tubular portion in rotary manner about said axis of symmetry, a first hinge pin hinged to a fixed frame to rotate about a hinge axis parallel to and eccentric with respect to the axis of symmetry, and said actuating means rotating said first hinge pin about said hinge axis.

Temma et al. further teach said connecting portion is a hollow tubular portion having an axis of symmetry parallel to the axis of rotation of said drive wheel (51) (see Fig. A); and in that said cam actuating means comprise a first hinge pin engaging said

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hollow tubular portion in rotary manner about said axis of symmetry, and said actuating means rotating said first hinge pin about said hinge axis.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Webb and Barrett to include the tubular portion and hinge pin as taught by Temma et al. in order for the wheel to rotate and provide proper tensioning to the belt.

However Webb, Barrett and Temma et al. combination doesn't explicitly disclose a first hinge pin hinged to a fixed frame to rotate about a hinge axis parallel to and eccentric with respect to the axis of symmetry.

Floehr teaches a pivot assembly having a first hinge pin (48) hinged to a fixed frame to rotate about a hinge axis parallel to and eccentric with respect to the axis of symmetry (see Fig. 11).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the assembly of Webb, Barrett and Temma et al. combination to include the hinge pin orientation as taught by Floehr in order to provide alignment to the pin with other parts.

Claims **10, 11, 15 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Webb (4,822,321)**, in view of **Barrett (2,823,546)**, further in view of **Temma et al. (20020183149)**, further in view of **Floehr (3,157,132)**, further in view of **Bakker (5,967,919)**.

As per claims 10 and 11, Webb, Barrett, Temma et al. and Floehr combination teaches all the structural elements of the claimed invention, as mentioned in claim 9

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above, but doesn't explicitly disclose said elastic means comprise a torsion spring housed in tubular portion and having one end fixed angularly to said first hinge pin and the opposite end fixed angularly to the tubular connecting portion, and said tubular connecting portion defines an annular cavity coaxial with said axis of symmetry; said torsion spring being a wire spring housed in said annular chamber and coaxial with said axis of symmetry.

Bakker teaches a belt tensioner having said elastic means comprise a torsion spring (26) housed in tubular portion (36) and having one end fixed angularly to first hinge pin (94) and the opposite end fixed angularly to the tubular connecting portion (36) (see col.4, lines 8-16 and see Fig. 2) (Claim 10), and said tubular connecting portion defines an annular cavity (38) coaxial with said axis of symmetry; said torsion spring (26) being a wire spring housed in said annular chamber and coaxial with said axis of symmetry (see Figs. 1 and 2) (Claim 11).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the spring arrangement of Bakker et al. in place of the spring arrangement of Temma et al. in order to bias the wheel on drive member for benefit of a compact mechanism.

As per claims 15 and 16, Webb, Barrett, Temma et al. and Floehr combination teaches all the structural elements of the claimed invention, as mentioned in claim 9 above, but doesn't explicitly disclose frame being connected integrally to a fixed body by a single through screw extending coaxially with said hinge axis, and said frame has a recess bounded by a cylindrical end surface coaxial with said axis of symmetry; said

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connecting portion being housed removably in said recess; and said first hinge pin being connected in rotary manner to a second hinge pin coaxial with the hinge axis and integral with a supporting plate of said frame.

Bakker teaches frame (28) is connected integrally to a fixed body (24) by a single through screw (76) extending coaxially with said hinge axis (see Fig. 1) (Claim 15), and said frame has a recess (38) bounded by a cylindrical end surface coaxial with said axis of symmetry; said connecting portion being housed removably in said recess; and the first hinge pin (70) being connected in rotary manner to a second hinge pin (34) coaxial with the hinge axis and integral with a supporting plate (32) of said frame (see Fig. 1) (Claim 16).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the assembly of Webb, Barrett, Temma et al. and Floehr combination to include the screw as taught by Bakker in order to maximize compactness.

Allowable Subject Matter

Claims **12-14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In claim 12, the prior art of record fails to teach or suggest the first hinge pin is fitted integrally with a radial toothed portion of said gear drive. Claims 13 and 14 depend from claim 12, and would be allowable due to their dependency.

Response to Arguments

Applicant's arguments filed 03/27/2009 have been fully considered but they are not persuasive.

Applicants first argue that "Temma et al. do not anticipate the claimed feature that the actuating means can be activated to detach said drive wheel from at least one of said rotary member and said drive member." The examiner respectfully disagrees. As paragraph 0064 of Temma et al. indicates, "...spring 54 supplies initial tension. The assist motor 55 is normally or reversely driven for adding or subtracting tension caused by the assist motor 55 to or from the initial tension so that the optimum belt tension can be obtained." Since the motor is capable of being reversely driven to subtract tension from the initial tension supplied by the spring, the motor can be reasonably considered as being capable of detaching the drive wheel from the drive member (belt) by the motor applying a greater tension than that of the spring.

Applicants next argue that, "Temma et al. fail to describe the motor 55 as reversible as specified in the claims that the force of the spring 54 overcomes the resistance of the electric motor when not actuated." As Fig. 3, paragraph 0063 lines 9-14 and paragraph 0064 indicate, the spring keeps the drive wheel in contact with the belt by overcoming the motor's resistance when the motor is not operating.

Applicant's arguments, see first paragraph of page 11, filed on 03/27/2009, with respect to the rejection(s) of claim 1 under 35 USC 103(a) have been fully considered

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and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference. Barrett (2,823,546) teaches elastic means keeping a drive wheel in contact with a rotary member as disclosed in col.2, lines 43-46 of the patent document.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NURI ALTUN whose telephone number is (571)270-5807. The examiner can normally be reached on Mon-Fri 7:30 - 5:00 with first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272 7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bradley T King/

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Primary Examiner, Art Unit 3657

NBA